FIG. 1

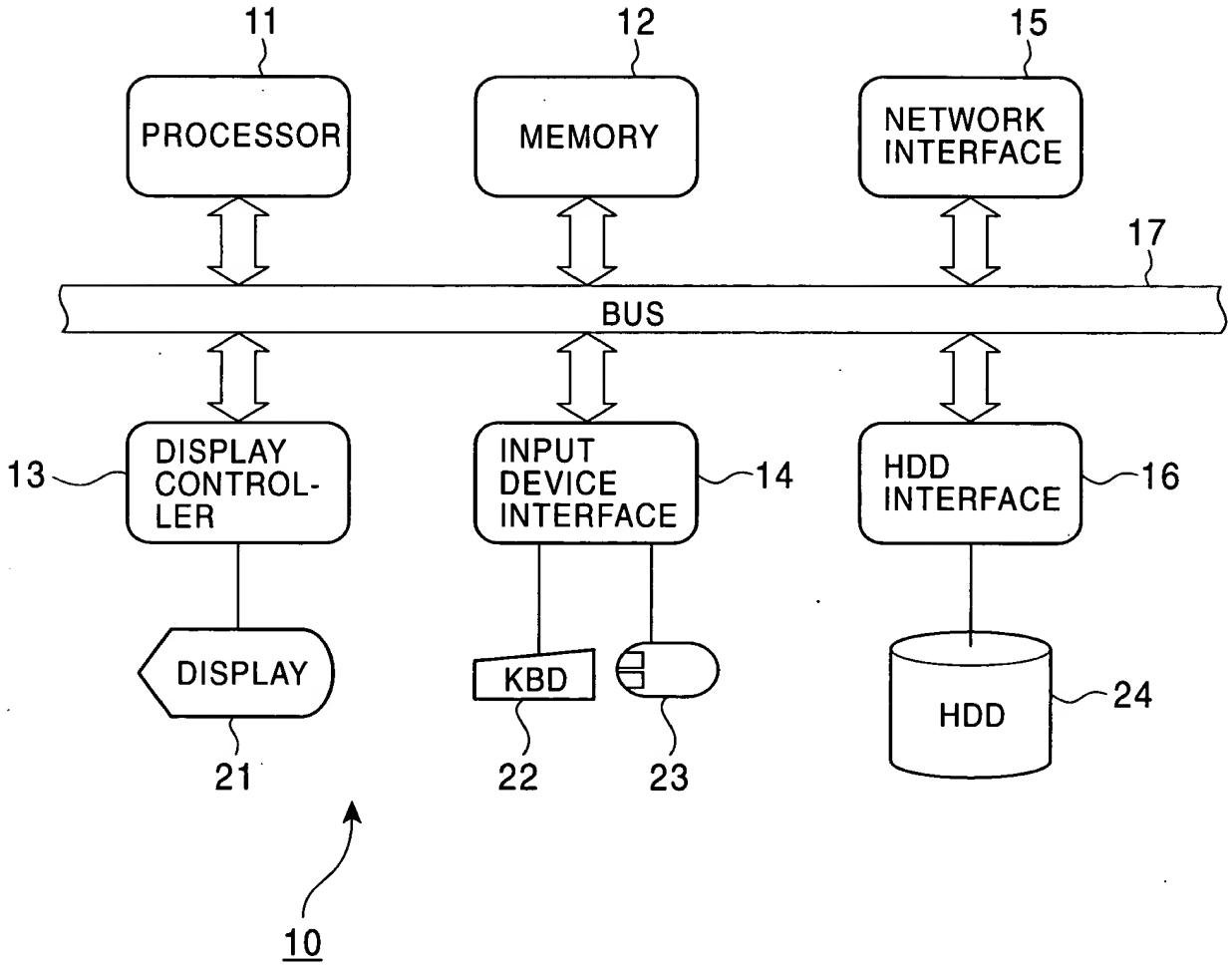

11
12
15
PROCESSOR
MEMORY
NETWORK INTERFACE
17
BUS
13
DISPLAY CONTROL-LER
INPUT DEVICE INTERFACE
14
HDD INTERFACE
16
DISPLAY
KBD
HDD
24
21
22
23
10

FIG. 2

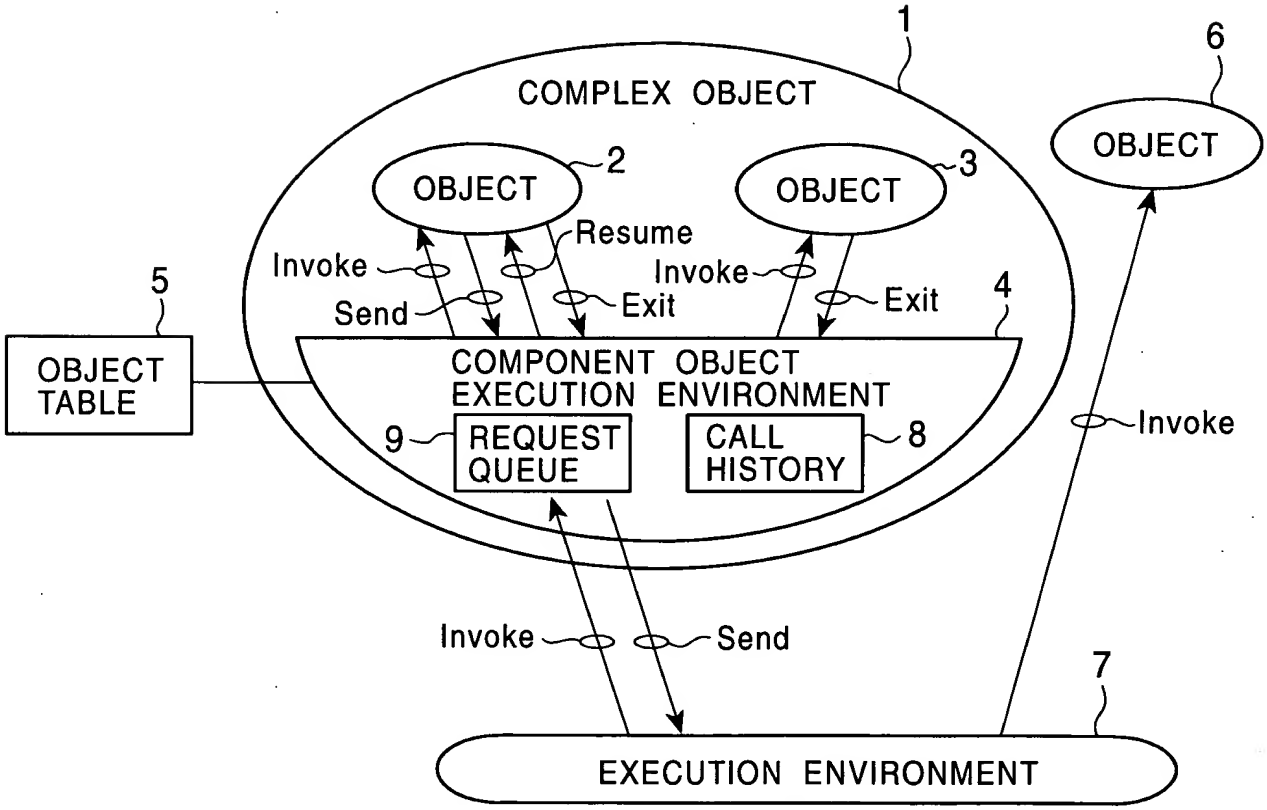

1
COMPLEX OBJECT
6
OBJECT
OBJECT
2
OBJECT
3
Resume
Invoke
Invoke
Send
Exit
Exit
4
5
OBJECT TABLE
COMPONENT OBJECT EXECUTION ENVIRONMENT
9
REQUEST QUEUE
CALL HISTORY
8
Invoke
Invoke
Send
7
EXECUTION ENVIRONMENT

FIG. 3

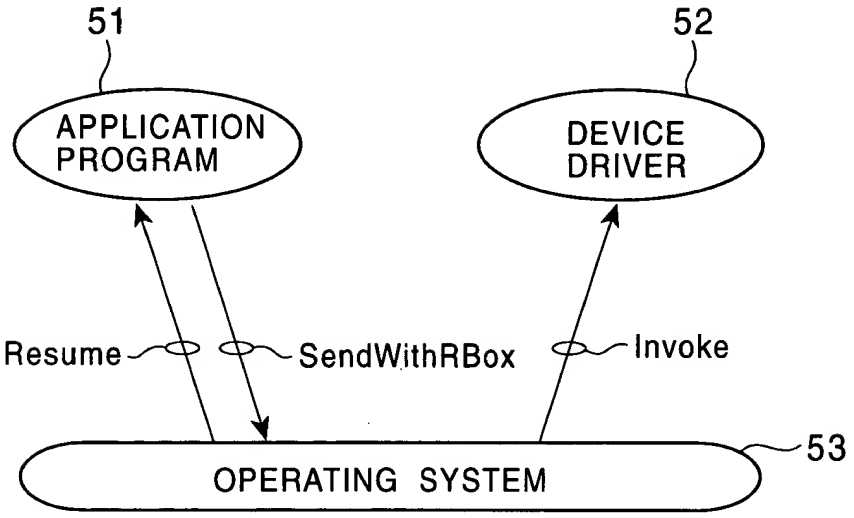

51
52
APPLICATION PROGRAM
DEVICE DRIVER
Resume
SendWithRBox
Invoke
53
OPERATING SYSTEM

FIG. 4

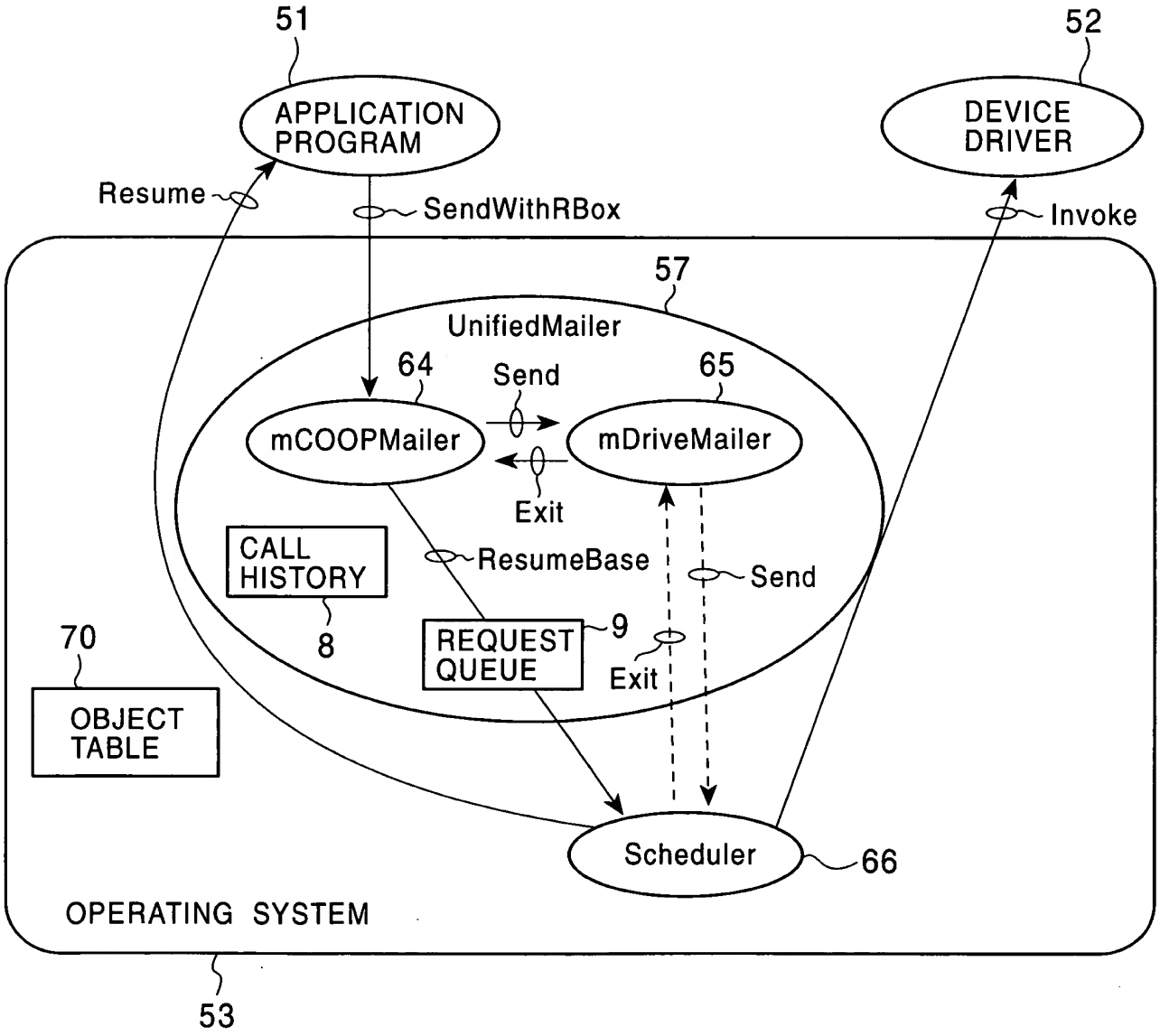

51
52
APPLICATION PROGRAM
DEVICE DRIVER
Resume
SendWithRBox
Invoke
57
UnifiedMailer
64
Send
65
mCOOPMailer
mDriveMailer
Exit
CALL HISTORY
ResumeBase
Send
8
REQUEST QUEUE
9
Exit
70
OBJECT TABLE
Scheduler
66
OPERATING SYSTEM
53

FIG. 5

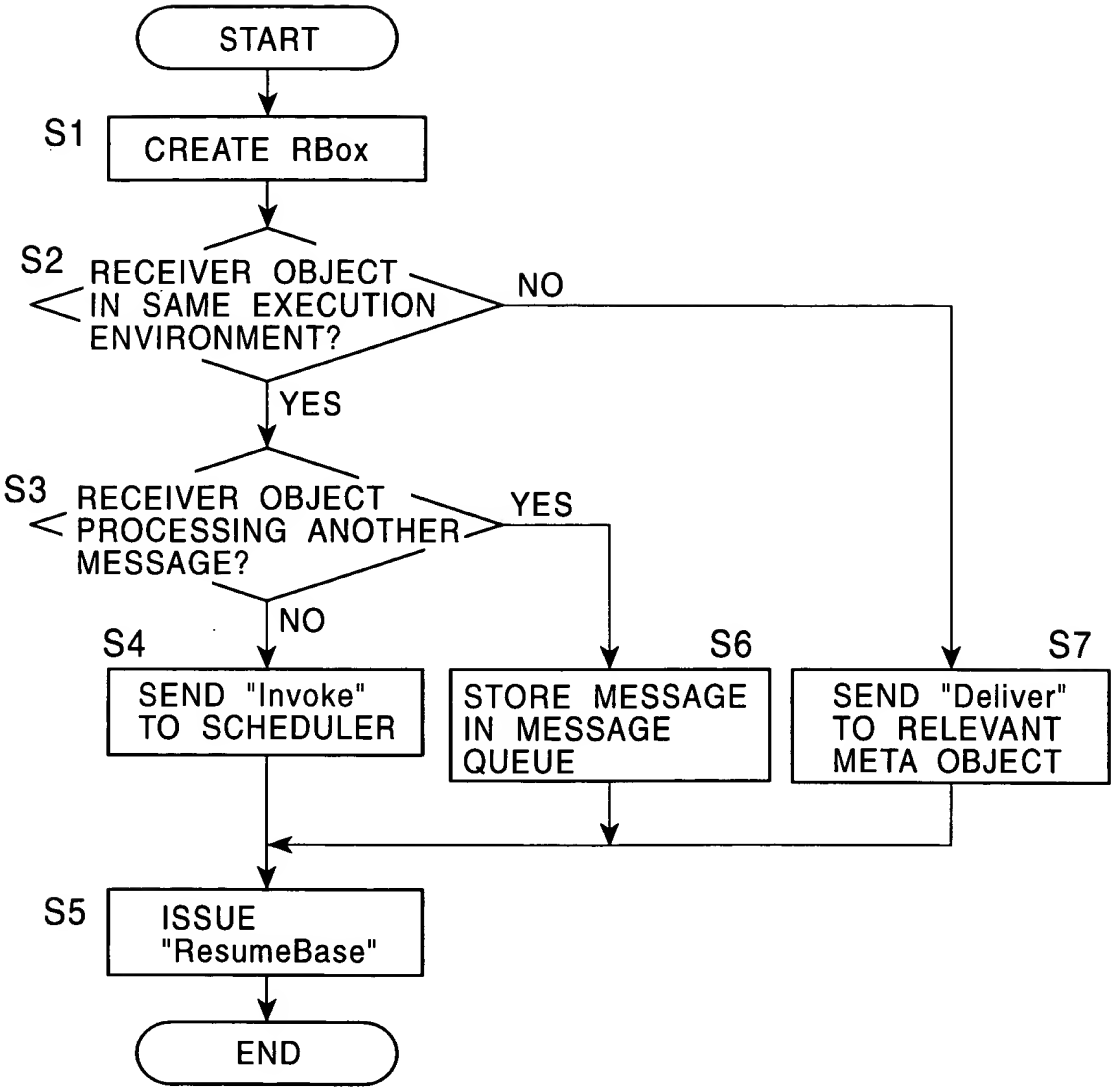

START
S1
CREATE RBox
S2
RECEIVER OBJECT IN SAME EXECUTION ENVIRONMENT?
NO
YES
S3
RECEIVER OBJECT PROCESSING ANOTHER MESSAGE?
YES
NO
S4
SEND "Invoke" TO SCHEDULER
S6
STORE MESSAGE IN MESSAGE QUEUE
S7
SEND "Deliver" TO RELEVANT META OBJECT
S5
ISSUE "ResumeBase"
END

FIG. 6

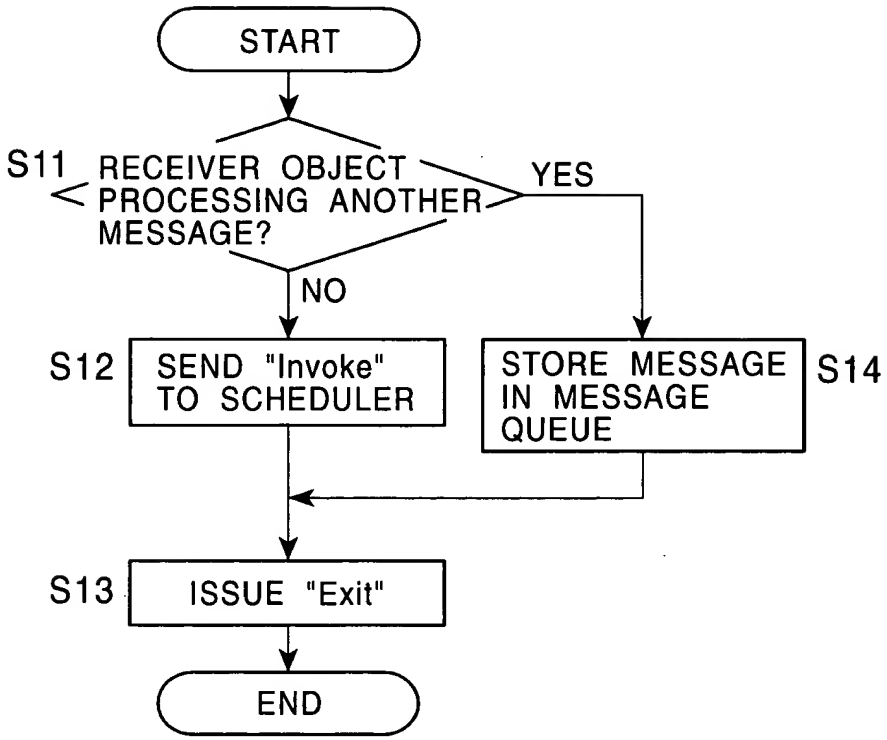

START
S11
RECEIVER OBJECT PROCESSING ANOTHER MESSAGE?
YES
NO
S12
SEND "Invoke" TO SCHEDULER
STORE MESSAGE IN MESSAGE QUEUE
S14
S13
ISSUE "Exit"
END

FIG. 7

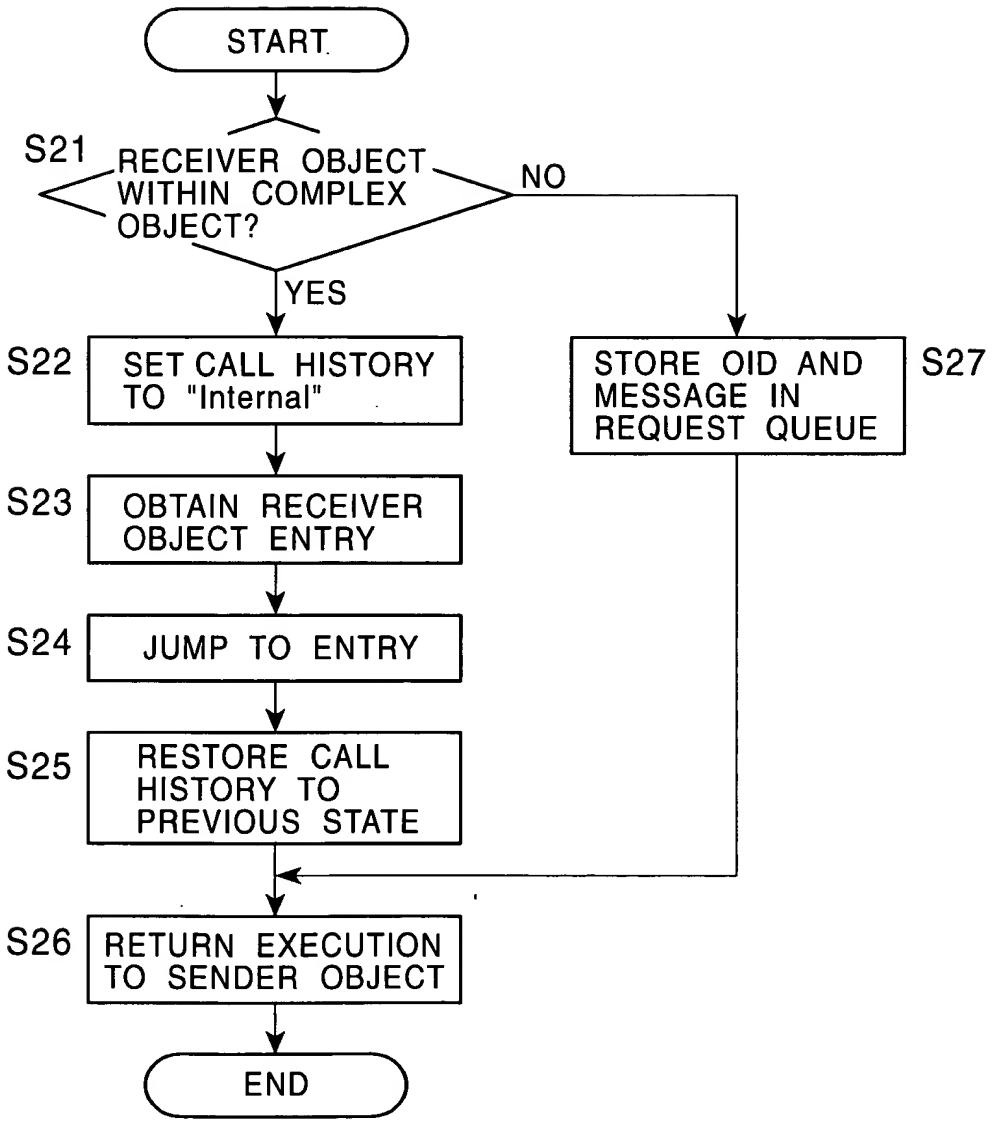

START
S21
RECEIVER OBJECT WITHIN COMPLEX OBJECT?
NO
YES
S22
SET CALL HISTORY TO "Internal"
S23
OBTAIN RECEIVER OBJECT ENTRY
S24
JUMP TO ENTRY
S25
RESTORE CALL HISTORY TO PREVIOUS STATE
S26
RETURN EXECUTION TO SENDER OBJECT
END
S27
STORE OID AND MESSAGE IN REQUEST QUEUE

FIG. 8

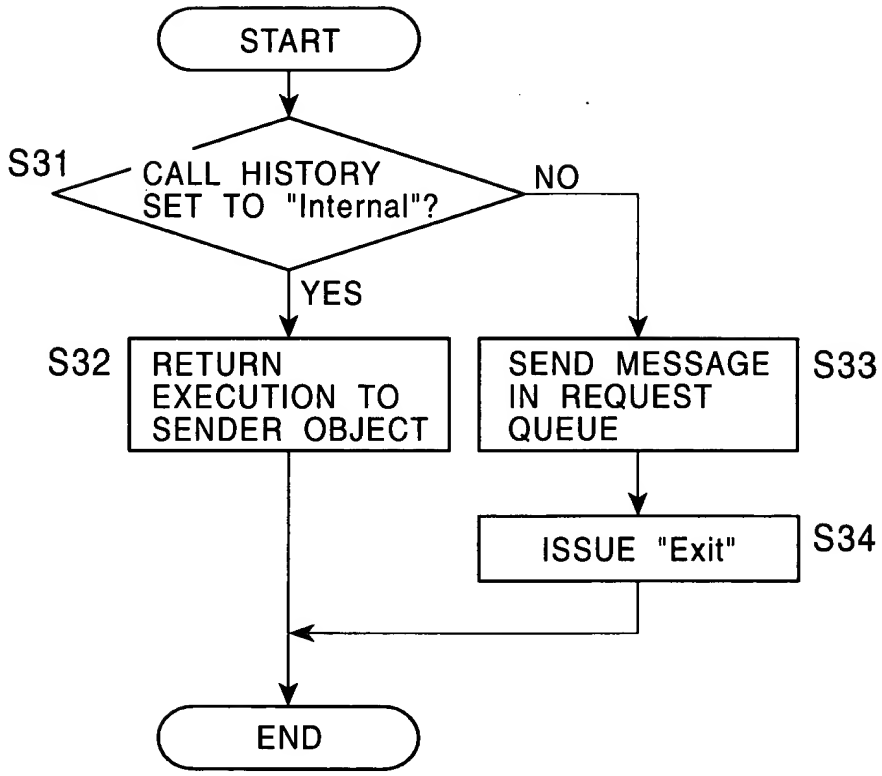

START
S31
CALL HISTORY SET TO "Internal"?
NO
YES
S32
RETURN EXECUTION TO SENDER OBJECT
SEND MESSAGE IN REQUEST QUEUE
S33
ISSUE "Exit"
S34
END

FIG. 9

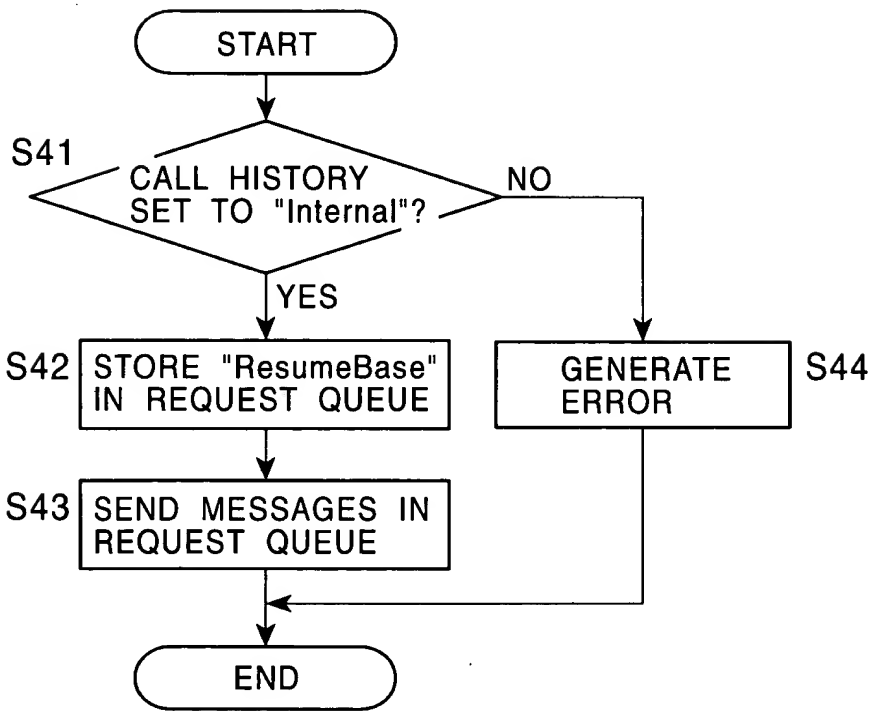
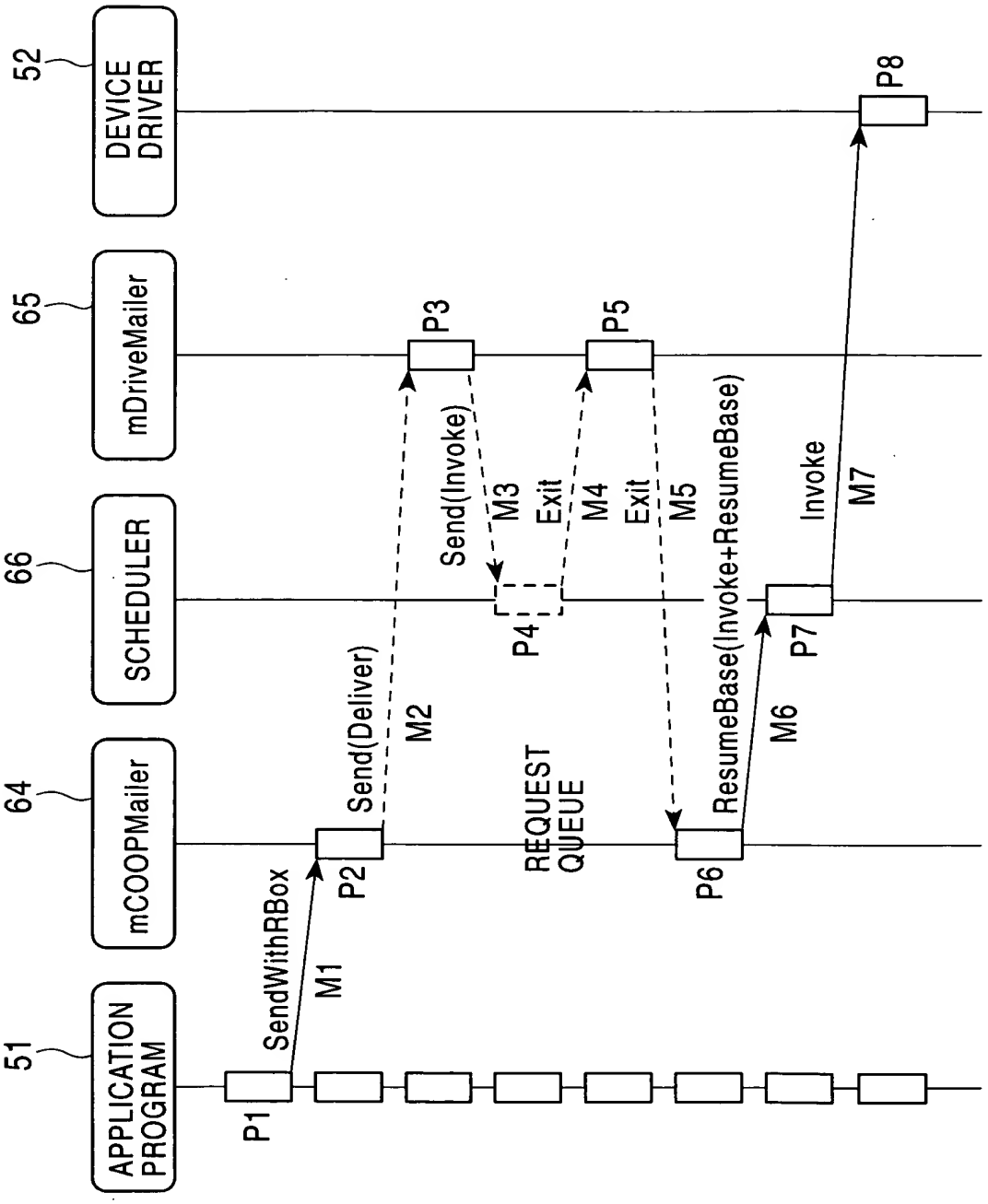

START
S41
CALL HISTORY SET TO "Internal"?
NO
YES
S42
STORE "ResumeBase" IN REQUEST QUEUE
GENERATE ERROR
S44
S43
SEND MESSAGES IN REQUEST QUEUE
END

FIG. 10


51
APPLICATION PROGRAM
64
mCOOPMailer
66
SCHEDULER
65
mDriveMailer
52
DEVICE DRIVER
P1
SendWithRBox
M1
P2
Send(Deliver)
M2
REQUEST QUEUE
P3
Send(Invoke)
M3
P4
Exit
M4
P5
Exit
M5
P6
ResumeBase(Invoke+ResumeBase)
M6
P7
Invoke
M7
P8